

UK - Bycatch

The incidental capture, or bycatch, of non-target species in fisheries is a major problem in many parts of the world.

Globally, the toll on all cetaceans is estimated to exceed 300,000 animals per year (Read et al., 2003). Bycatch of cetaceans is widespread in UK waters and has been recognised to be a serious threat to the conservation of cetaceans in the north-east Atlantic region (Defra, 2003).

Cetacean species caught in the greatest numbers are harbour porpoises and common dolphins (Ross & Isaac, 2004). Bycatch has been the major cause of death in UK-stranded harbour porpoises and common dolphins since systematic post-mortem examinations were first conducted in 1990 (Jepson et al., 2005a).

Stranding figures from the UK indicate that harbour porpoise strandings have been steadily increasing since the beginning of the 1990s (Sabin et al., 2003). It should be noted that stranding figures only represent a very small fraction of the total number of bycaught animals since factors such as weather, wind and tides mean that a large proportion of total mortalities will never strand. Harbour porpoises are highly prone to bycatch in bottom-set gillnet and tangle net fisheries, due largely to their feeding habits on or near the seabed. High levels of harbour porpoise bycatch have been recorded in gill nets in the Celtic Sea (Tregenza et al., 1997) and North Sea (Northridge & Hammond, 1999). Such high levels of bycatch are likely to be unsustainable and represent a real threat to the populations.

High levels of dolphin bycatch have been recorded in pelagic (mid-water) trawl fisheries and gillnet fisheries (Tregenza et al., 1997, Tregenza & Collett, 1998). The large numbers of common dolphin strandings reported in south-western UK waters show a very strong seasonal pattern, occurring during the open season of the pair trawl fishery for sea bass in the western English Channel. The small UK fishery is estimated to have killed over 900 common dolphins between 2000 and 2005, though the limited monitoring of pelagic fisheries precludes an assessment of total mortality levels (ICES, 2005). However, the number and scale of pelagic trawl fisheries operating in waters to the west and south-west of the UK (mainly comprising large fleets from other EU countries), together with the number of bycaught dolphins that strand on surrounding coasts, suggest that the total annual mortality figure is in the thousands, possibly many thousands, and is unsustainable (Ross & Isaac, 2004).

The UK Government acknowledged the bycatch problem and, in 2003, published the UK Small Cetacean Bycatch Response Strategy as a step towards finding a solution. To date, three main approaches to reducing cetacean bycatch have been taken in Europe and the UK: pingers, fishing gear modifications and area restrictions.

Trials have been running since 1998 to investigate the effectiveness of acoustic deterrent devices or 'pingers' on static or 'set' nets. Pingers are small, electronic devices attached to fishing nets that emit sounds at the frequencies to which small cetaceans are most sensitive. The aim of pingers is to produce a sound that either causes the animals to avoid the area, or alerts them to the presence of the nets. These trials revealed a dramatic reduction in harbour porpoise bycatch when pingers were used on the nets. However, the devices are expensive, require maintenance and may interfere with the setting and hauling of the nets – making them unpopular with fishermen. The efficiency of pingers has also been observed to decrease over time and also when used in commercial fisheries rather than controlled trials (NFMS, 2000). This may be due to the animals becoming habituated to pingers following prolonged exposure (Cox et al., 2001). There is also a great deal of concern that the widespread use of pingers may result in harbour porpoises being excluded from areas important for their survival (CEC, 2002).

In response to the high dolphin bycatch rate recorded in the UK sea bass pelagic pair-trawl fishery, mitigation trials using pingers began in 2001. Startlingly, early trials showed the rate of bycatch to be higher in the nets equipped with pingers and rigorous trials with different types of pingers had to be abandoned due to the high rate of dolphin bycatch in the control nets, i.e. those without pingers.

Further trials in this fishery focused on the development of a dolphin exclusion device. This is a

selection grid (typically made of steel bars) positioned within the net that allows fish to pass through and further into the net, but which deflects any dolphins upwards to one or more escape hatches in the top of the net. This exclusion device was also trialled in combination with pingers. These trials have produced mixed results and, after six seasons of monitoring and development work, the trials have yet to produce a workable and successful configuration (Northridge, 2006).

The most effective method of bycatch reduction is closure of the fishery. However, it is important to ensure that fishing effort and cetacean bycatch are not merely displaced elsewhere. Restrictions to reduce fishing effort are often unpopular measures and frequently difficult to impose in multi-national fisheries. In 2005, the UK implemented a ban on bass pair trawling within 12 nautical miles of the coast. Unfortunately, despite presenting compelling evidence to the European Commission, the ban remains applicable only to UK registered vessels as other Member States fail to impose similar restrictions on their fishing fleets.

The Government is under international obligations to address the problems affecting cetacean species in relation to bycatch, including agreements under the Agreement on the Conservation of Small Cetaceans of the Baltic and North Seas (ASCOBANS) and the EU Habitats Directive. These include: an obligation to monitor the incidental capture or killing of all cetaceans; and to ensure that incidental capture and killing does not have a significant negative impact on the species concerned. Despite this, relatively few EU fisheries have been subject to thorough or routine observer monitoring, and bycatch continues to impact on cetacean species. In 2004, after several years of negotiations, the European Community adopted a new regulation to address the problem of cetacean bycatch in fisheries. EU Regulation 821/2004 is limited in its scope and provisions, but does represent important

progress. It requires all Community vessels of 12m or longer fishing in specified drift, gill and tangle net fisheries to use pingers on these nets. It also requires Member States to introduce observer schemes to monitor cetacean bycatch in certain fisheries, most notably in pelagic trawls, and the phase out of driftnet fisheries in the Baltic Sea. However, despite the pinger requirement coming into force in June 2005 in the North Sea, January 2006 in the Western Channel and January 2007 in the Eastern Channel, the UK fleet (along with the majority of European vessels) is still not applying this provision – the reasons given being that the pingers available present too many practical and health and safety problems.

This means that in the UK there are still no mitigation measures in place to reduce what is likely to remain the main conservation and welfare problem affecting cetaceans around our coasts.

In December 2008, WDCS has issued a report on the severe welfare implications of a death in nets: *Shrouded by the Sea* can be found in the publications section of the WDCS website.